

Work Order ID 154922

Tuesday, January 03, 2017 3:26:12 PM

154922

Page 1

Item ID: 647.4113

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/5/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 1/12/2017 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: DAS 21 Date: JAN 04 2017

Tooling:

Date:

Run Start

NR1QC: 9-89

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.4100	n/c								

110

0.01

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: N/CProg Rev: N/C

2-Deburr if necessary

0.01

801/17/20

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.01

801/17/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130 QC8- Inspect parts - second check 0.00

130

QC

Memo

0.03

Quality Control

DAS

38

9-89

JAN 20 2017

140 Bend as per dwg 0.03

140

Brake NC

Memo

0.03

Brake NC

DAS
30
9-89

8

FEB 03 20

150 QC5- Inspect part completeness to step on W/O 0.00

150

QC

Memo

0.03

Quality Control

DAS
38
9-89

8

FEB 03 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Page 3

Item ID: 647.4113 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Clip
Start Date: 1/5/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 1/12/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
160									
Outsource4	Memo	239.99		P/O: 35239		8		FEB 08 2017	DAS 13 1569
Outsource process - Anodize	HARD ANODIZE, COLOR BLACK AS PER DWG.(SEE NOTE 2)								
170	Receive & Inspect for Damage & Mat'l Certs	0.00							
170									
Packaging	Memo	0.03							
Packaging									8x SpHed 21
180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.03				8			DAS 38 9-89
Quality Control	1.0 mils thickness primer							FEB 22 2017	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
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Page 4

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190		0.00							
190									
SprayPaint	Memo	0.33							
Spray Painting	PRIME IAW MIL-P-23377J TYPE1 CLASS N AS PER DWG. (SEE NOTE 2)								
	BATCH: _____								
200		0.00							
200									
QC									
Quality Control	Memo	0.01							
210		0.00							
210									
Packaging	Identify as per dwg & Stock Location: <u>CCK112</u>								
Packaging	Memo	0.01							
	IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV								

N/A done @ ATA FEB 08 2017 DAS 13 8-89

8 FEB 23 2017 DAS 38 9-89

8 FEB 23 2017 DAS 6 9-89

DQA: _____ Date: _____



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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.13

Quality Control

DAS
21
9-89

FEB 23 2017

DQA: _____ Date: _____



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Picklist Print

Tuesday, January 03, 2017 3:26:12 PM

Page 1

Work Order ID: 154922

154922

Parent Item: 647.4113

647 4113

Parent Item Name: Clip

Start Date: 1/5/2017

Required Date: 1/12/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.070		Purchased	No			110	sf	27.1000	0.13	1.094737			

M2024T3S 070

2024-T3 .070 sheet

01/17/2017

Location

Loc Qty

Loc Code

MAT022

27.1

m130387

27.1

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

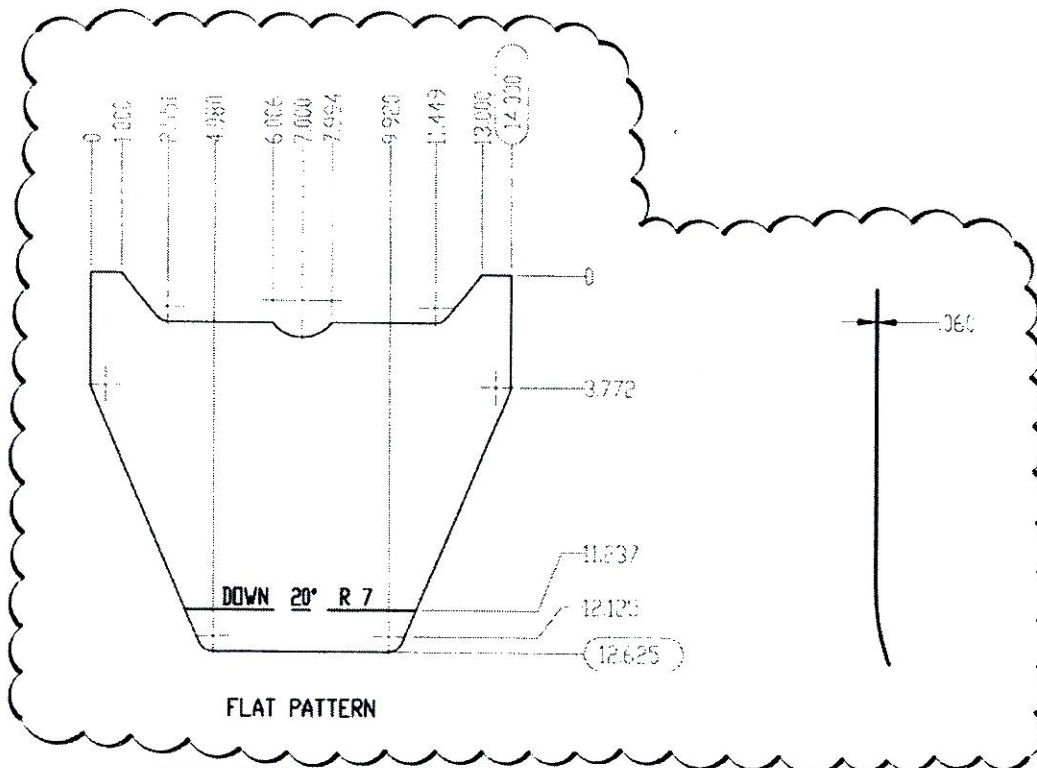
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04510				SHEET 1 OF 1	
DWG NO. 647.4100	REV: N/C	PREPARED BY: J. BECKER	DATE: 04/24/14	EFFECT ON DWG ☐ INC. ☒ UNINC.	
DWG TITLE: SHEETMETAL					
APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: MODIFIED DOUBLER.



SHEET 1, ZONE C2 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 154922 MLS
18-01-04

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02866				SHEET 1 OF 1	
	DWG NO. 647.4100	REV: N/C	PREPARED BY R. ROSANO	DATE: 05/05/10	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: SHEET METAL					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: CHANGED PRETREATMENT CALLOUT					

SHEET 1, ZONE A1 IS:

NOTE: UNLESS OTHERWISE SPECIFIED

1 MATERIAL - ALUMINUM 6061-T3 PER AMS4004-A-25074

2 FINISH - HARD ANODIZE 14W MIL-A-8625 TYPE II

PRETREAT PR 148 ADHESION PROMOTER

PRIME 14W MIL-P-3341 TYPE I CLASS II

IS

3 DEBURR AND BREAK ALL SHARP EDGES

4 IDENTIFY 14W MPT-120

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

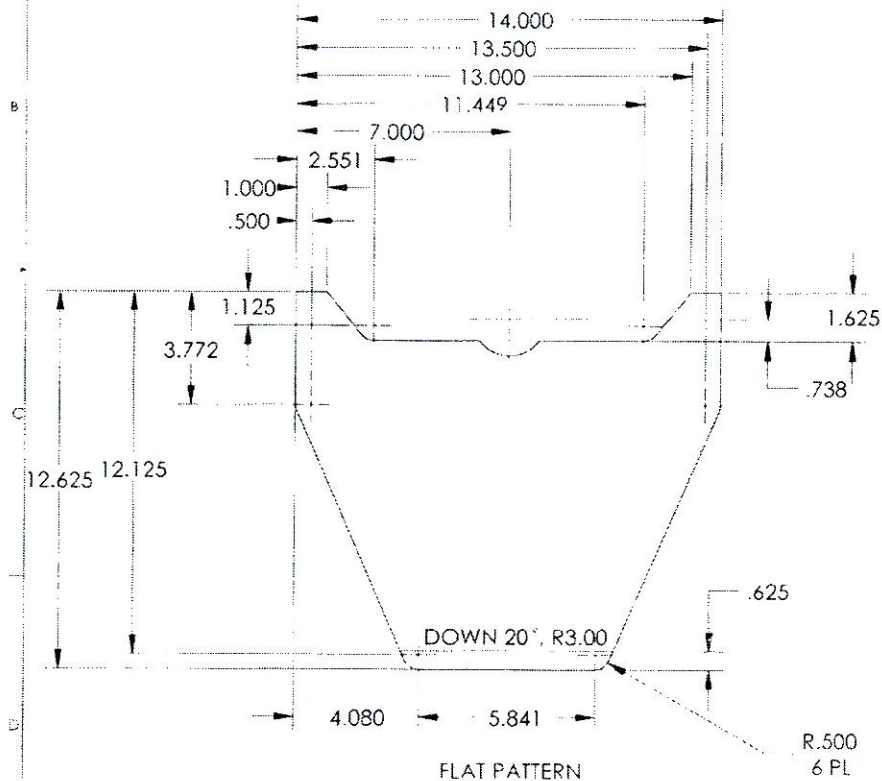
NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE II,
CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N

3. DEBURR AND BREAK ALL SHARP EDGES

4. IDENTIFY IAW MPP-120



.060

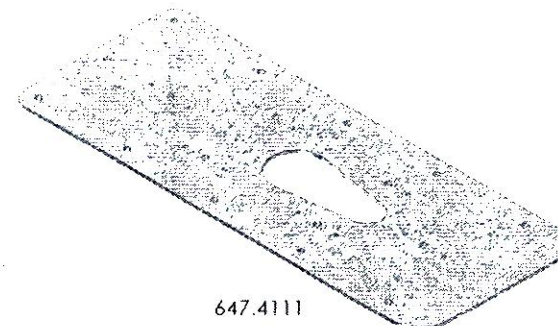
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UNINCORPORATED ECN(s)

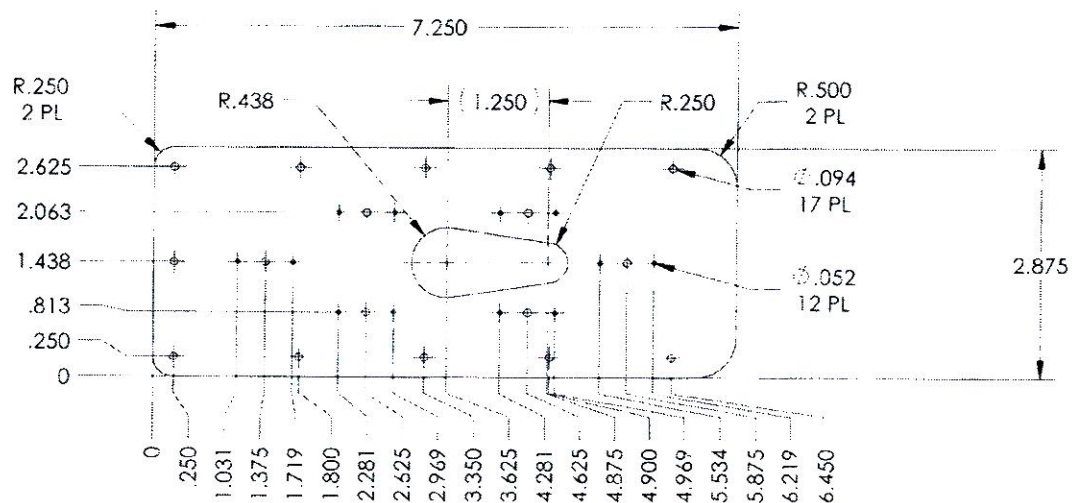
028606, 04510

647.4110	CHN	△	△	
647.4115	SHN	△	△	
647.4114	QHM	△	△	
647.4113	CLP	△	△	
647.4112	CUP	△	△	
647.4111	DOUBEP	△	△	
647.4110	DOUBIES	△	△	
FIG. #	PART #	DESCRIPTION	MATL	SPEC
PART LIST				
NEXT ASY BL		APICAL INDUSTRIES		
		2000 LAMBLE HEIGHTS DR		
		SAN LEANDE, CA 92556-1911 (760) 241-1000		
		SHEETMETAL		
		647.4110		
		REV		

.040
TYP.



647.4111



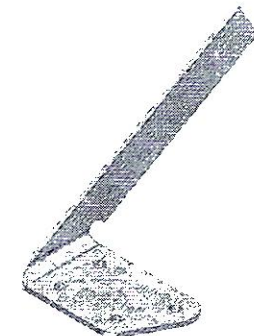
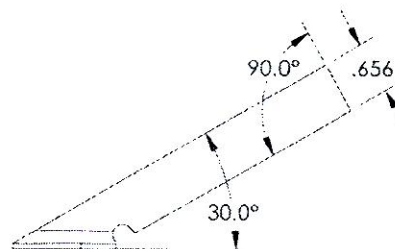
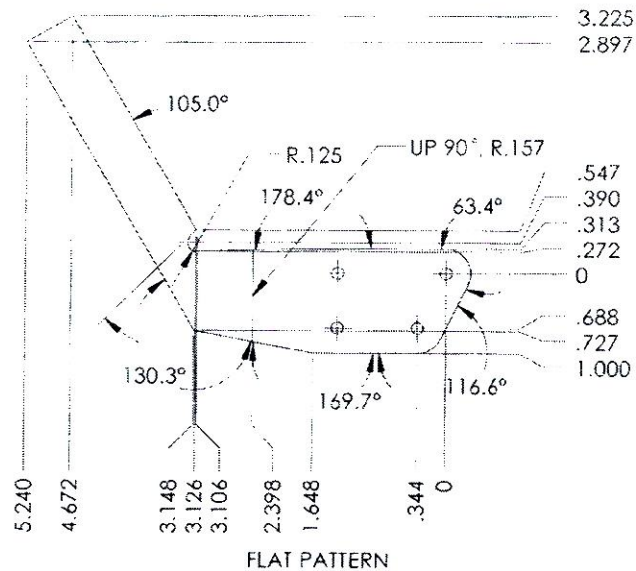
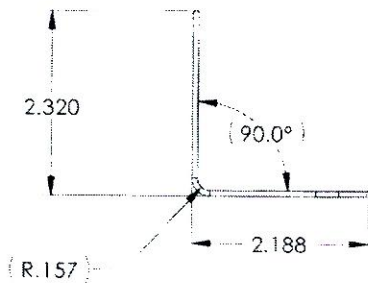
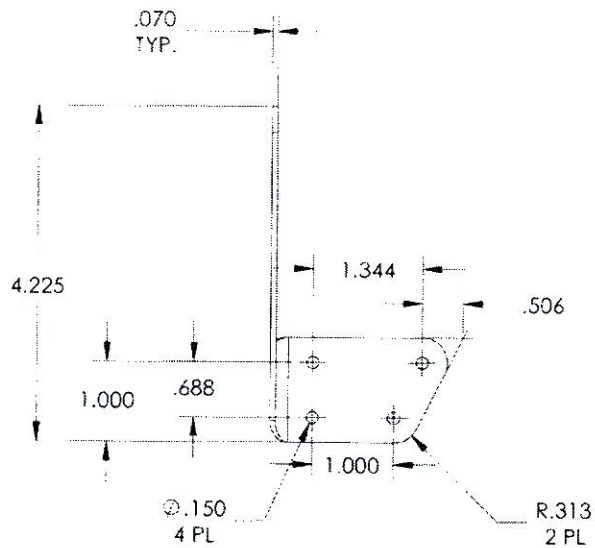
APICAL INDUSTRIES

2455 LAMAR BLVD., SUITE 100
OAKLAND, CA 94612 (510) 424-5353

SHEETMETAL

647.4100

ISSUE



647.4113 SHOWN
647.4112 OPPOSITE

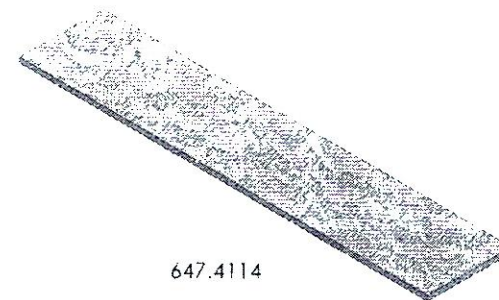
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OCEANIDE, CA. 92026-2512 (760) 24-3333	
SHEETMETAL	
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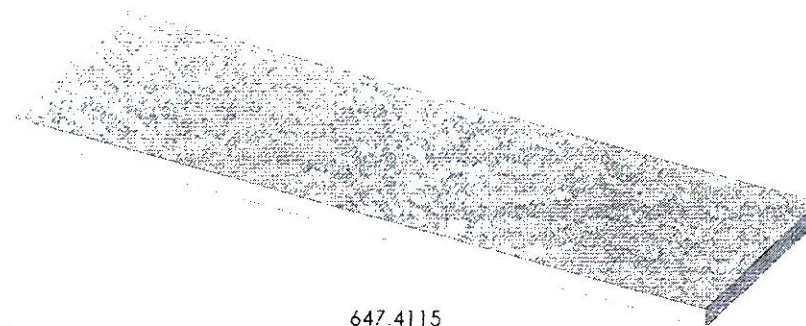
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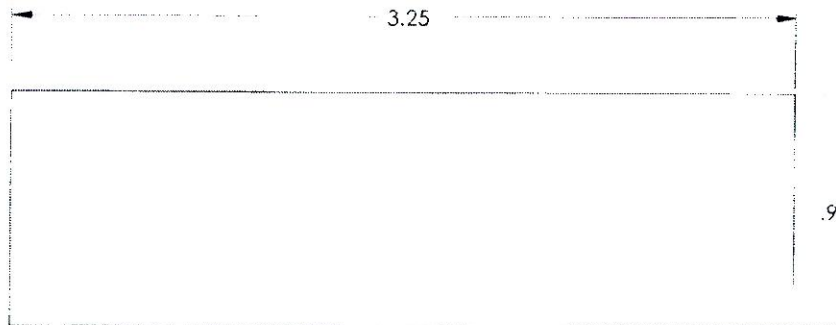
APICAL INDUSTRIES	APICAL INDUSTRIES
608 TEMPLE HEIGHTS DR	608 TEMPLE HEIGHTS DR
WENDELL, CA 95084-2501	WENDELL, CA 95084-2501
SHEETMETAL	SHEETMETAL
647.4100	647.4100

.090



647.4115

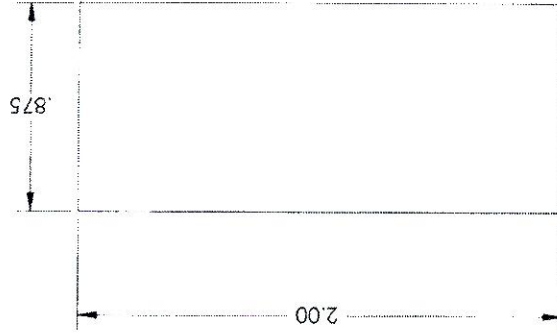
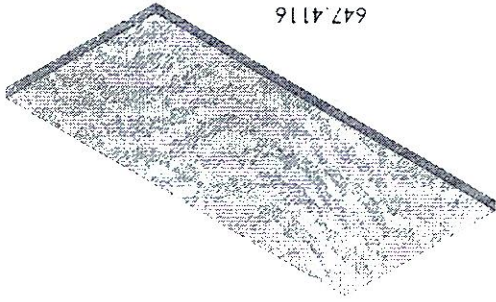
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.984

APICAL INDUSTRIES	
2603 TEMPLE HEIGHTS DR.	
OCEANSIDE, CA 92066-3612 (760) 744-1100	
SHEETMETAL	
DATE	647.4100
BY	
CHECKED	
APPROVED	

APICAL INDUSTRIES		SHEETMETAL		647.4100	
APICAL INDUSTRIES		SHEETMETAL		647.4100	
APICAL INDUSTRIES		SHEETMETAL		647.4100	





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35239

Purchase Order Date 2/8/2017

PO Print Date 2/8/2017

Page Number 4 of 6

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Total: \$117.50

10	154910	647.4110 DOUBLER REV. N/C	2/24/2017	5.00	\$23.25	\$116.25
----	--------	------------------------------	-----------	------	---------	----------

Yes

2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$116.25

11	154921	647.4112 CLIP REV. N/C	2/24/2017	8.00	\$7.00	\$56.00
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Yes

2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$56.00

12	154922	647.4113 CLIP REV. N/C	2/24/2017	8.00	\$7.00	\$56.00
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Yes

2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$56.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

2/8/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912955

Date: 21-Feb-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
8 ea	Part: 646.3310 Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 19598	Rev: N/C PO: PO35239	Line: 1
5 ea	Part: 647.4110 Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20238	Rev: N/C PO: PO35239	Line: 10
8 ea	Part: 647.4112 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20411	Rev: N/C PO: PO35239	Line: 11
8 ea	Part: 647.4113 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20458	Rev: N/C PO: PO35239	Line: 12
20 ea	Part: 650.9201 Eyelet Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20470	Rev: A PO: PO35239	Line: 13
20	Part: D2348	Rev: C	



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912955

Date: 21-Feb-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms

Ship Via

Quantity

Description

be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.

CERTIFICATE OF CONFORMANCE

A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.

MADE IN CANADA.

SP17-02-21